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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,548

Applicant(s)

MACLEOD, DONALD JAMES

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

Drawings

1. The objection to the Figures 1-3 is withdrawn.

Specification

2. The amended title "LOW POWER SPINDLE MOTOR ASSEMBLY FOR DISC DRIVES", has been entered into the file wrapper. The amended title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner suggests "LOW POWER SPINDLE MOTOR MOUNTED IN A WELL FOR DISC DRIVES".

Claim Objections

3. The objection to Claim 14 is withdrawn.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9, 10, and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Marcum et al.(Marcum)(US 3,047,869). Marcum teaches an enclosed housing with upper and lower portions. The lower portion 14 having a well with a motor stator mounted thereon. The rotor hub having a thick portion at 2 on which the disc 8 is mounted and a lower portion on which the rotor magnetic 6 is mounted. The shaft being fixed to the housing by spring mounts 15, 16. The hub 2 supported for rotation by bearings 4, 5, where bearings 5 are located outside the well and within the hub.

6. The Claims 9-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Komatsu et al.(Komatsu)(JP 59-164,413). Komatsu teaches a motor assembly having a spindle hub 8 rotating a mirror disc about a fixed shaft. The hub supporting a magnet 9 on the lower portion and having a dynamic pressure bearing between the shaft 7 and the hub 8. The motor having an enclosed housing with a well in the lower housing. The stator 11 of the motor mounted to the inner surface of the well. The hub supported for rotation by dynamic pressure bearings which extend axially outside the well.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herdman et al.(Herdman)(US 3,864,748) and Kazama et al.(Kazama)(US 4,875,110). Herdman teaches an enclosed housing with a lower portion 12' having a stator 32 mounted on the inner wall and an upper portion 17. Herdman teaches the rotor 31 having a hub 27 to drive a magnetic disc 28, where the hub is wider than the motor magnet 31. Herdman teaches the right bearings 34, extending axially outside the well which or the uppers surface of the base flange 11 in figure 1. Herdman teaches every aspect of the invention except the rotor rotating around a fixed shaft. Gilovich

teach a disc drive motor with a fixed shaft. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Herdman with the fixed shaft of Gilovich to provide a high density, high speed motor for a disc drive.

9. Claims 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcum et al.(Marcum)(US 3,047,869) in further view of Lin(US 4,965,476). Marcum teaches every aspect of the invention except the use of a multipolar annular magnet on the rotor and the disc positioned between the bearings. Lin teaches a multipolar annular magnet 46 to rotate a disc drive with the disc between the bearings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Marcum with the permanent magnet of Lin to allow the motor to operate as a brushless DC motor to control the rotation of the rotor discs when storing magnetic memory, and with the disc between the bearings as shown in Lin Fig. 1 to provide a low power low height motor.

10. Claims 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herdman et al.(Herdman)(US 3,864,748) and Kazama et al.(Kazama)(US 4,875,110), in further view of Lin(US 4,965,476). Herdman and Kazama teach every aspect of the invention except the use of a multipolar annular magnet on the rotor and the disc positioned between the bearings. Lin teaches a multipolar annular magnet 46 to rotate a disc drive. It would have been obvious to a person of ordinary skill in the art

at the time of the invention to construct the motor of Herdman and Kazama with the permanent magnet of Lin to allow the motor to operate as a brushless DC motor to control the rotation of the rotor discs when storing magnetic memory, and with the disc between the bearings as shown in Lin Fig. 1 to provide a low power low height motor.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 30, of U.S. Patent No. in view of Herdman et al.(US 3,864,748). Claim 30 recites all the limitations of claim 9 except for the upper house section. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of claim 30 with an upper housing section to protect the magnetic discs from contamination, as shown in Herdman.

Response to Arguments

13. Applicant's arguments filed 2/10/03 have been fully considered but they are not persuasive. The Applicant's argument that Marcum does not teach the disc mounted between the bearings is not persuasive, because the limitation is not found in claims 9-14, only the newly added claim 15. The position of the disc between the bearings is clearly shown in Lin. The Applicant's argument that Komatsu does not teach a motor that could drive a disc is not persuasive. The rotating mirror of Komatsu is a disc which is rotated by the motor. The Applicant's arguments that Herdman uses excessive space is not persuasive because the claim limitations are taught as set forth above. The Applicant's argument that a terminal disclaimer will be submitted upon notice of allowable claims is acceptable.

Conclusion

14. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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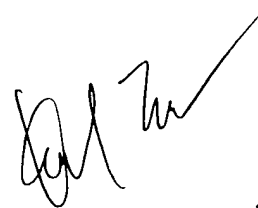
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
May 26, 2003



KARL TAMA
PRIMARY EXAMINER